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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/594,470	09/27/2006	Joel Zychick	1047-031	1309
34060	7590	03/26/2010		
MICHAEL N. HAYNES 1341 HUNTERSFIELD CLOSE KESWICK, VA 22947			EXAMINER SASTRI, SATYA B	
			ART UNIT 1796	PAPER NUMBER
			MAIL DATE 03/26/2010	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/594,470

**Applicant(s)**

ZYCHICK ET AL.

**Examiner**

SATYA B. SASTRI

**Art Unit**

1796

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) 23-34 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 and 22 is/are rejected.
- 7) ☒ Claim(s) 21 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/G608)  
Paper No(s)/Mail Date See Continuation Sheet

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

Continuation of Attachment(s) 3. Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :12/19/07, 5/30/08, 7/1/08, 3/13/09, 3/26/09, 8/14/09, 10/5/09, 2/9/10, 3/4/10.

### DETAILED ACTION

1. Applicant's election with traverse of Group I invention, claims 1-22 in the reply filed on 9/27/06 is acknowledged. The examiner assigned to the current application has been changed. The new examiner's name and contact information are stated at the end of this action. Applicant is requested to take note of the change.
2. Applicant's traversal is on the ground(s) that the amended claims share a common inventive feature and that no substantial evidence has been presented that the applied portions of the cited references teach the compositions as presently amended. This is not found persuasive because the common technical feature common to Groups I and II is a composition prepared from a plurality of materials comprising multifunctional hydrophilic monomer with two or more functionalities and comprising at least 2 but less than 5 acrylic groups and not more than 11 hydroxyl groups in an amount of 0.1 to 10% by wt. of the dry composition, a processing aid in an amount of 1 to 10% by wt. of the dry composition and a polyethoxy methacrylate in an amount up to a balance by dry wt. of the composition, where in the compositions releases heat when an ambient temperature is about 5°C to about -15°C.

The special technical feature is taught by the prior art to Davenport et al. that discloses an aqueous dispersion comprising polymerized nanoparticles (PNPs) having a mean diameter of 1-50 nm and including as polymerized units, at least one multi-ethylenically unsaturated monomer and at least one ethylenically unsaturated water soluble monomer (abstract). The at least one ethylenically unsaturated water soluble monomer may be an ionic or nonionic monomer.

Disclosed nonionic monomers include poly(alkylene oxide) esters of (meth)acrylic acid such as poly(ethylene oxide)<sub>20</sub> methacrylate and poly(propylene oxide)<sub>150</sub> acrylate and may be used in amounts of 0.5 to 99% by wt. of the polymer (0019). With regard to the processing aid, the prior art discloses free radical polymerization using initiators such as peroxyesters, alkylhydroxyperoxides, redox initiators etc in amounts ranging from 0.05 to 10% by wt, based on the total weight of the monomers (paragraph 0033). An aqueous polymer composition may be prepared in the presence of surfactants (paragraph 0040). The aqueous compositions may include 1-90% PNP weight fractions (paragraph 0043) and may be used on substrates such as skin, hair, leather etc. (paragraph 0047). Thus, the monomeric units are explicitly disclosed and it would have been obvious to one of ordinary skill in the art to include them in any amount within the disclosed range, including in amounts that fall within the scope of the present invention. In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a *prima facie* case of obviousness exists. *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976). See MPEP § 2144.05. As such, an amount of "up to a balance" for the polethoxy methacrylate as recited in instant claim 1 includes 0. Up to includes 0 as a lower limit. *In re Mochel*, 470 F 2d 638, 176 USPQ 194 (CCPA 1974). *Ex parte Khusid et al.*, 174 USPQ 59 (PTO Bd. App. 1971). The property as recited in instant claim 1 must necessarily be intrinsic to the polymers disclosed in Davenport et al. given that the compositional requirements are met.

In light of above, the common technical feature of presently cited claims in Groups I and II fails to define a contribution over Davenport et al. and thus, the common technical feature does not amount to a special technical feature. Thus, there is lack of unity between the cited groups.

The requirement is still deemed proper and is therefore made FINAL. Claims 23-34 are

withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim.

*Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-20, 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Devenport et al. US 2003/0232914 A1).

The Davenport et al. reference that discloses an aqueous dispersion comprising polymerized nanoparticles (PNPs) having a mean diameter of 1-50 nm and including as polymerized units, at least one multi-ethylenically unsaturated monomer and at least one ethylenically unsaturated water soluble monomer. In certain embodiments, the composition includes pigment particles and other polymer particles (abstract). The at least one ethylenically unsaturated water soluble monomer may be an ionic or nonionic monomer. Disclosed nonionic monomers include poly(alkylene oxide) esters of (meth)acrylic acid such as poly(ethylene oxide)<sub>20</sub> methacrylate and poly(propylene oxide)<sub>150</sub> acrylate and may be used in amounts of 0.5 to 99% by wt. of the polymer (0019). With regard to the processing aid, the prior art discloses free radical polymerization using initiators such as peroxyesters, alkylhydroxyperoxides, redox initiators etc in amounts ranging from 0.05 to 10% by wt, based on the total weight of the

monomers (paragraph 0033). An aqueous polymer composition may be prepared in the presence of surfactants (paragraph 0040). The aqueous compositions may include 1-90% PNP weight fractions (paragraph 0043) and may be used on substrates such as skin, hair, leather etc. (paragraph 0047).

The prior art fails to disclose a compositions prepared from a plurality of materials as presently claimed.

The prior art explicitly discloses a number of multifunctional monomers that overlap in scope with the multifunctional hydrophilic monomer recited in claim 1. Additionally, the disclosed range of this monomer overlaps with the presently cited amount of 0.1 to 10% by wt. of the monomer. Additionally, the disclosed water-soluble nonionic monomer include poly(ethylene oxide)methacrylate and both, the nonionic monomer and processing aid may be used in amounts that overlap substantially with the presently claimed range. Given the teaching on suitable monomers, initiators and the corresponding usable ranges, it would have been obvious to one of ordinary skill in the art to include them in any amount within the disclosed range, including in amounts that fall within the scope of the present invention. In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a *prima facie* case of obviousness exists. *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976). See MPEP § 2144.05. As such, an amount of "up to a balance" for the polyethoxy methacrylate as recited in instant claim 1 includes 0, i.e. up to includes 0 as a lower limit. *In re Mochel*, 470 F 2d 638, 176 USPQ 194 (CCPA 1974). *Ex parte Khusid et al.*, 174 USPQ 59 (PTO Bd. App. 1971). The property as recited in instant claim 1 must necessarily be associated with the polymers of Davenport et al. that overlap in scope with the composition as claimed presently. In general,

materials and their properties are inseparable. Likewise, the properties as recited in instant claims 2, 14-17 must necessarily be intrinsic to the disclosed polymers that overlap in scope with the composition as claimed presently.

With regard to claims 3-13, the polymerized nanoparticles (PNPs) having a mean diameter of 1-50 nm (ab.).

With regard to claims 3, 4, 18 in certain embodiments of Davenport et al., the composition includes pigment particles and other polymer particles (abstract).

With regard to claims 20, the amount of PNP disclosed in the aqueous compositions is typically from 1 to 90% by wt. (0039, 0128). With regard to claim 22, the aqueous compositions may include up to 3% by wt. of surfactant (0040).

***Allowable Subject Matter***

5. Claim 21 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art of record fails to teach or suggest compositions comprising soy bean protein composition as claimed presently.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Satya Sastri at (571) 272 1112. The examiner can be reached on Mondays, Thursdays and Fridays, 7AM-5.30PM.



If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. David Wu can be reached on 571-272-1114.

The fax phone number for the organization where this application or proceeding is assigned is (571) 273 8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Satya B Sastri/

Examiner, Art Unit 1796